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INTELLIGENCE COMMUNITY SUPPORT TO
RESEARCH AND DEVELOPMENT

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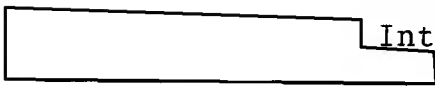

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INTELLIGENCE COMMUNITY SUPPORT TO
RESEARCH AND DEVELOPMENT

Prepared by
The Intelligence Community Staff
for
The Director of Central Intelligence

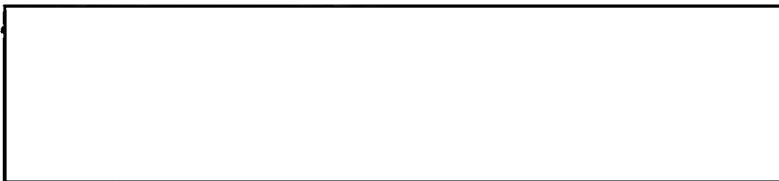
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ABSTRACT

25X1 ☐ This report summarizes results of a study which analyzed Intelligence Community support to the DoD R&D program. Problems are identified; facts needed for decisions are adduced; and recommendations for improvement are made. Information presented is as of 1 September 1977. A supplement will be published upon completion of the study.

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EXECUTIVE SUMMARY

PURPOSE AND BACKGROUND

25X1 1. ☐ This document summarizes results of a study which analyzed problems in providing scientific and technical intelligence (S&TI) to managers of R&D programs. Similar problems exist elsewhere in the Community, but the Office of Performance Evaluation and Improvement of the Intelligence Community Staff singled out this area for study principally because the S&TI and R&D programs are both well-documented, hence easily analyzed.

COMMUNITY PROBLEMS

25X1 2. ☐ The following summary sentences highlight major problems documented by the study, following interviews with managers, producers, and users of S&TI at all levels throughout the R&D and Intelligence Communities:

- Needs of R&D users are not systematically stated
- There is a potential for repeated expenditure of scarce S&TI resources to satisfy similar R&D requirements
- The scientific and technical intelligence system is not sufficiently responsive to R&D users
- Users in the R&D Community of specific S&TI products are not known to intelligence managers or producers
- Distribution of finished intelligence is faulty. Users often do not receive needed, expensively-produced documents. Many receive unneeded documents
- R&D users have no means of commenting on the adequacy of intelligence products in a manner that causes change.

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In the aggregate, these problems demonstrate that there is very ineffective linkage between S&TI producers and R&D users.

FINDINGS

3. ☐ Selected findings are summarized in the following statements:

- Scientific and technical intelligence support to R&D is big business. To support the ☐ R&D program the FY-78 Community budget devotes over ☐ to S&TI.
- Intelligence collection costs are greatly affected by demands from the R&D Community for precision and detail.
- Effective S&TI support of DoD R&D programs will satisfy all users. Therefore, satisfaction of S&TI needs at the R&D project manager and "bench" levels is the dominant management issue.
- There are now no effective Community-wide management tools for scientific and technical intelligence support to R&D.
- A system exists within one command of one Service which closes the producer-user gap. This system could be applied Community-wide with current resources. Initial improvements would be evident in the near term, but a long-term commitment and an oversight function are needed.

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RECOMMENDATIONS

4. ☐ Using currently available resources, the ICS should institute a Community-wide system to accomplish the following:

- Encourage the development of a DoD-wide data base of S&TI/R&D associations
- Assess the utility of all S&TI products to determine which should be combined, eliminated, or reformatted

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- Overhaul the system for developing distribution lists
- Encourage the Defense Intelligence School to train local intelligence officers in the techniques of intelligence support to R&D
- Encourage the publication of a CIA S&TI task catalog similar to DIA's
- Review CIA S&TI tasking procedures to improve awareness of and response to DoD R&D needs
- Monitor Community system for S&TI support to R&D and assess wider applicability
- Arrange for effective product evaluation.

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TABLE OF CONTENTS

	<u>Page</u>
ABSTRACT	i
SUMMARY	ii
LIST OF FIGURES	vii
LIST OF TABLES	viii
I. PREFACE	1
Background; Problem; Scope of the Study; Approach.	
II. CURRENT SYSTEM FOR S&TI SUPPORT TO DOD R&D . . .	5
System Requirements; Subsystem for Local Support to "Commodity" Organi- zations; Subsystem for Intelligence Production Requirements; Distribution Subsystem.	
III. COMMUNITY PROBLEMS AND DEFICIENCIES	10
General; Major Problems; Summary of Deficiencies; Isolation of Production Agencies.	
IV. ADDITIONAL FINDINGS OF FACT	19
S&TI Support to R&D is Big Business; Impact of R&D Requirements on Collec- tion Costs; Comprehensiveness of R&D Requirements for S&TI; Model System for Closing Producer-User Gap; CIA S&TI Products in Support of R&D.	
V. RECOMMENDATIONS	32
Summary; Data Base of S&TI and R&D Associations; Distribution Lists for S&TI Publication; Product Evaluation to Improve S&TI Publications; Utility of S&TI Products; Professionalism of Local Intelligence Officers; CIA S&TI	

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Task Catalog; CIA Tasking Procedures;
Community System for S&TI Support to
R&D.

APPENDIX A:	ORGANIZATIONS VISITED AND PERSONS INTERVIEWED	36
APPENDIX B:	DISTRIBUTION SHORTFALLS AND WASTE	42
APPENDIX C:	DARCOM SYSTEM FOR S&TI SUPPORT TO R&D	53
APPENDIX D:	ORGANIZATION FOR S&TI SUPPORT TO R&D	76
APPENDIX E:	PRODUCT EVALUATION	82
APPENDIX F:	DRAFT DIRECTIVES	87
APPENDIX G:	GLOSSARY	97

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LIST OF FIGURES

	<u>Page</u>
3.1. Relationship of R&D User to Intelligence Cycle	11
3.2. Distribution Problems: Omission of Key R&D Users	16
B.1. Distribution Problems: Omission of Key R&D Users	50
C.1. DARCOM Organization for S&TI Support to R&D . . .	58
D.1. Intelligence Community Organization for S&TI Support to R&D	77

LIST OF TABLES

	<u>Page</u>
4.1. S&TI Costs by Program FY-78	20
4.2. DoD S&TI Production Agencies: FY-77 Manpower and Costs	21
4.3. S&TI Tasks Supporting Individual R&D Efforts	25
4.4. R&D Efforts Supported by Individual S&TI Tasks	26
4.5. Intelligence Support Tasks by Command	28
4.6. Priority A Association of S&TI and R&D Tasks	29
A.1. Intelligence Community S&TI Support to R&D--Interview Highlights	37
B.1. S&TI Costs by Program FY-78	45
B.2. DoD S&TI Production Agencies: FY-77 Manpower and Costs	47
B.3. Intelligence Support Tasks by Command	49
C.1. S&TI Tasks Supporting Individual Commands	62
C.2. S&TI Tasks Supporting Individual R&D Efforts	64
C.3. R&D Efforts Supported by Individual S&TI Tasks	66
C.4. Priority A S&TI Tasks by Command	67
C.5. Priority A Association of R&D Projects with S&TI	68
C.6. Intelligence Support Tasks by Command	70
C.7. Priority A S&TI Tasks by Command	71
C.8. Priority A Association of S&TI and R&D Tasks	72
C.9. Non-Priority A Association of S&TI to R&D	74

I. PREFACE

BACKGROUND

25X1 1.1 [] The Intelligence Community Staff (ICS) has conducted a study of the management of production, use and evaluation of scientific and technical intelligence (S&TI). In order to limit the study to a manageable but meaningful sample, it was focused on S&TI support to the DoD R&D Community, with only a quick look at support to S&TI users at the national level.

25X1 1.2 [] The objectives of this ICS effort were to:

- Analyze existing arrangements for S&TI support, especially to DoD R&D users, to determine strengths and deficiencies
- Devise a Community-wide management system which will improve: (a) identification of user needs, (b) response to these needs, (c) evaluation of S&TI products by actual users, and (d) feedback to S&TI managers and producers
- Gain familiarity with the R&D and S&TI Communities so as to advise and assist in the implementation of the system following the consideration of comments and suggestions from interested organizations.

PROBLEM

25X1 1.3 [] There is now no common system for the association of S&TI production tasks and resultant products with actual or potential R&D users. As a result, there are no effective management tools for development and refinement of S&TI tasking in relation to changing R&D needs. The full spectrum of S&TI support capability from identification of specific S&TI requirements through intelligence collection, analysis, dissemination, and evaluation is adversely impacted. Of particular concern is the potential for repeated expenditure of S&TI resources to satisfy similar R&D requirements, while failing to provide needed intelligence to other R&D users. A management system to correct these and related problems would be of great value, particularly if it could be implemented with currently available resources.

SCOPE OF THE STUDY

25X1 1.4 [] S&TI is important to many users. The R&D Community needs it in order to assist key decisionmakers in:

- Avoiding technological surprise
- Achieving and maintaining technological sufficiency
- Selecting and developing weapon systems at the lowest possible cost.

25X1 1.5 [] Although the R&D Community is the largest consumer of S&TI, there are many other important customers. It is axiomatic, for example, that tactics coupled with technology can result in decisive advantage. Thus, those who develop tactics, threat assessments, net evaluations, plans, and the like, all must have S&TI as a key input.

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25X1 1.6 [] For purposes of this study, it is assumed that if the S&TI requirements of the DoD R&D Community are met, most if not all of the needs of other users will be provided for. This assumption was identified to all those who participated in the study and no disagreement with it was surfaced. Therefore, the study has been limited to S&TI support to DoD R&D. The conclusions of this study may well have wider applicability.

APPROACH

25X1 1.7 [] In conducting the study and developing findings and recommendations, the study team interviewed representatives of CIA, DIA, DDR&E, Army, Navy, and Air Force concerned with S&TI support to R&D. Additionally, since the two members of the team are career intelligence specialists, they drew heavily on their own professional experience and judgment as well as that of persons interviewed.

25X1 1.8 [] The interview pattern consisted of an explanation of an existing S&TI/R&D support and evaluation system, used by one element of the Army, followed by discussions seeking to bring out these points:

- How are R&D users of S&TI identified?
- How are users' S&TI requirements processed?
- How is it ensured that the user gets needed S&TI products?
- What methods are used for user evaluation of S&TI products?
- What are the opinions/perceptions of the current DoD system for S&TI support to R&D?

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- What are the immediate reactions to the idea of general implementation of the S&TI/R&D support system mentioned above?

25X1 1.9 ☐ In surveying relevant literature, particular attention was given to problems of maldistribution of S&TI documents. Techniques used in analysis of this problem, along with results, are set forth in Appendix B, "Distribution Shortfalls and Waste". Since dissemination of S&TI is a critical support element, comments concerning the development and accuracy of document distribution lists were noted at every opportunity.

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II. CURRENT SYSTEM FOR S&TI SUPPORT TO DOD R&D

SYSTEM REQUIREMENTS

25X1 2.1 ☐ When one asks for a definition of intelligence support to R&D, ^{1/} the response will usually be in very limited terms. All too often this support is described as a library function. While data base support is an essential element, it is only one of several intelligence functions related to R&D. Intelligence support to an R&D project or task should include at least these elements:

- Closure of intelligence gaps (intelligence production requirements)
- Data base development and maintenance
- Threat definition
- Liaison with appropriate intelligence organizations
- Support to contracts
- Necessary quick reaction support
- Foreign material exploitation.

^{1/} It is recognized that R&D activities require more than just S&TI intelligence support. Although a given R&D project may require several other kinds of intelligence (e.g., order-of-battle, economic), this paper considers only S&TI.

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SUBSYSTEM FOR LOCAL SUPPORT TO "COMMODITY" ORGANIZATIONS

25X1 2.2 ☐ R&D activities are seldom conducted on an individual basis. Rather, associated R&D activities are usually grouped in "commodity" organizations. For example, the management of the development of the several Army surface-to-air missile systems is conducted at the U.S. Army Missile Research and Development Command (MIRADCOM). Intelligence support to MIRADCOM is planned and managed so that these R&D programs, as well as other "commodities" managed there, are supported by one small intelligence staff, rather than having each R&D Project Management Office with a dedicated intelligence staff. The same is generally true for Navy and Air Force R&D activities. These "local" intelligence staffs ^{2/} have the same general mission, that of providing intelligence support to their command/laboratory. However, there is considerable variation in resources, training, procedures and effectiveness. Regardless of the "local" intelligence support capability, it must be recognized that these are key points in the provision of S&TI support to R&D. One can generalize and state that if the "local" intelligence staff is ineffective, the whole "local" S&TI/R&D interaction is ineffective. See Appendix D, "Organization for S&TI Support to R&D", for additional details concerning placement of these staffs in relation to the rest of the S&TI community.

SUBSYSTEM FOR INTELLIGENCE PRODUCTION REQUIREMENTS

25X1 2.3 ☐ A most critical aspect of S&TI support to R&D is the identification of intelligence gaps and the actions taken to fill

25X1 ^{2/} These staffs are identified as follows: U.S. Air Force System Command--Directorate of Intelligence; U.S. Navy Material Command--Scientific and Technical Intelligence Liaison Office; U.S. Army Development and Readiness Command--Foreign Intelligence Office.

them by the submission of intelligence production requirements (IPR). In accordance with DIAM 75-1, IPRs are forwarded from an originator to DIA through command channels with the IPR being reviewed at each command level. These multiple reviews allow for the consolidation of similar IPRs, the rejection or support of the IPR and, where appropriate, the tasking of departmental intelligence assets rather than the forwarding of the IPR to DIA. Validation of the IPR and tasking for its satisfaction by either the departments or DIA should result in the publication of a task on a DIA Form 424. This task is then included in the DIA "Catalog of Approved Scientific and Technical Tasks" (CAST).

25X1 2.4 ☐ There are several key points that determine how well this process works. The most important step is the preparation of the IPR. Since there are potentially several steps and several people involved in the review and validation process, it is essential that the IPR be written so that it can stand on its own merits. The requirement must be clearly stated in terms of what is needed and for what purpose. The originator should reference existing intelligence documents and tasks and explain why these will not satisfy the requirement. Since questions of priority constantly arise, the impact of failure to obtain the requested data should be stated. All of these points must be considered during the processing of the IPR. The originator has the best understanding of the need. If the IPR he forwards is inadequate in any respect, research must be done for him somewhere else in the processing chain. The probability of misunderstanding of the requirement increases as the IPR moves away from the originator. Obviously, to properly prepare an IPR to support an R&D project, there must be access to a description of the project and a description of the intelligence available and/or in preparation. As will be explained in Section III, this is not always the case.

25X1 2.5 [] A second key point relates to the actions taken--or not taken--at the review points between the IPR originator and DIA. Although the system requires processing at the intermediate levels, such as the Navy Material Command, Air Force System Command or Army Development and Readiness Command, it appears that stops at these points seldom benefit the S&TI user to the degree possible. DARCOM S&TI managers state that they often issue direct tasking on the Army S&TI production agencies as a part of the IPR processing in order to expedite support. In these cases the IPR is forwarded to the next level with a description of the tasking already levied. It appears that the Air Force and Navy seldom use this technique. In fact, IPRs originating in Navy or Air Force organizations are usually passed directly to their production agencies rather than to DIA. This practice presents a problem that is discussed in Section III, "Community Problems and Deficiencies".

25X1 2.6 [] Finally, a third key point is at DIA. An almost universal complaint by R&D activities is that the IPR system is not responsive. While no data were gathered to develop actual processing time, there is no question that it is the perception of most potential IPR originators that the system responds slowly or not at all. This perception is one of the causes for the limited number of IPRs submitted to DIA in support of R&D. While it is possible that DIA is indeed responsive, the "audit trail" on actions is not such that originators of IPRs are aware of what might be being done in their behalf. This point will be more fully developed in Section III, "Community Problems and Deficiencies".

DISTRIBUTION SUBSYSTEM

25X1 2.7 [] The heart of the DIA distribution system is the Statement of Intelligence Interest (SII) which is submitted annually by

intelligence customers. The structure of the SII is such that it can be coded to reflect a range of user intelligence acquisition interest from broad to specific coverage. The SII is one of the tools used in the construction of distribution lists for S&TI documents resulting from tasks described in the CAST. The frequency of complaints concerning the kind and volume of documents received by customers and the apparent high error rate in S&TI document distribution lists indicate that the distribution system is in need of corrective work.

25X1 2.8 [] The efforts expended in the submission and satisfaction of IPRs and in the development of a good SII are wasted unless the S&TI product reaches the real customer. Unfortunately, it appears that the ultimate distribution step--that from the command/laboratory to the responsible R&D individual--is often not taken. Local document distribution is often planned poorly or not at all. If the requestor never receives the product of his request, it cannot be used. If it's never used, the total effort is wasted. If only part of the potential users see an S&TI product there is still wasted effort. The basis for distribution problems is presented in Appendix B, "Distribution Shortfalls and Waste".

III. COMMUNITY PROBLEMS AND DEFICIENCIES

GENERAL

3.1 [] The findings of the study have been divided into two categories: (a) those that state problems in S&TI support to R&D and (b) those that provide additional facts which can be used by decisionmakers in correcting problems. Problems and deficiencies are discussed in this section, and additional findings will be presented in the section that follows.

MAJOR PROBLEMS

3.2 [] There are two major closely-related problems in S&TI support to R&D, viz:

- The R&D user is not brought into the S&TI cycle
- There is no Community-wide system for ensuring S&TI support to R&D.

Requirement for User Involvement

3.3 [] Figure 3.1, "Relationship of User to Intelligence Cycle", shows graphically why the R&D manager--or, indeed, any user of intelligence--must be involved in the intelligence process. Sound S&TI support to R&D requires the dynamic involvement of both communities. All managers of R&D projects or tasks should be able to visualize the intelligence cycle working for

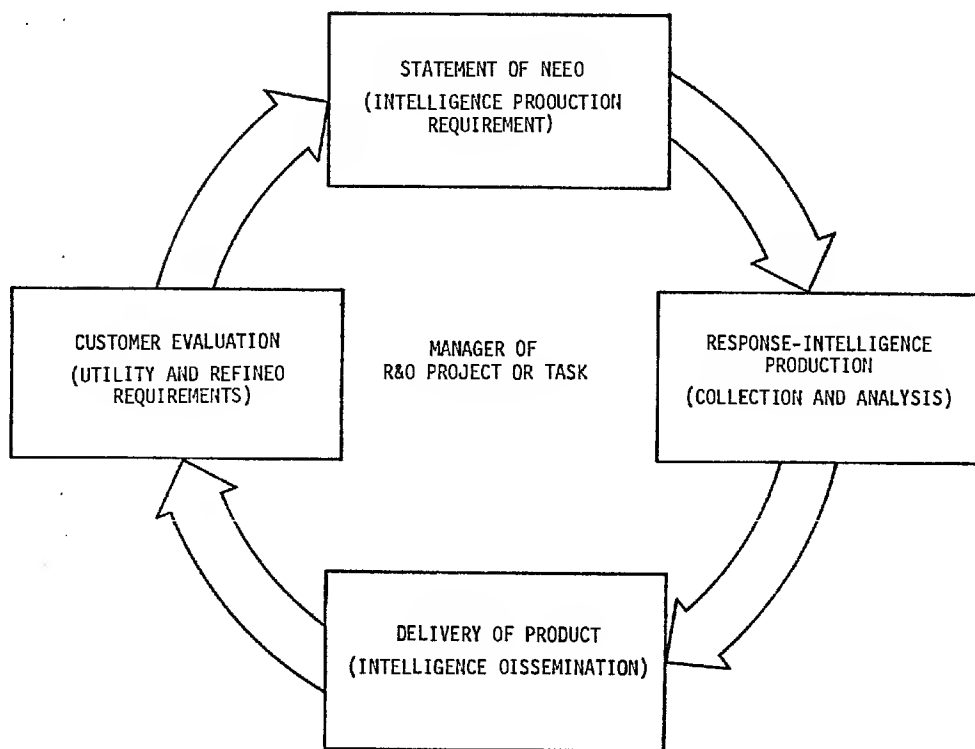


FIGURE 3.1
RELATIONSHIP OF R&D USER TO INTELLIGENCE CYCLE

them. They should have facilities for ascertaining gaps in needed intelligence and for converting those gaps into requirements. This step is shown in the upper box of Figure 3.1.

25X1 3.4 ☐ The R&D manager must have confidence that once he has stated a requirement it will result in a scheduled publication which he will receive, as shown in the right-hand and lower boxes of Figure 3.1. Of prime importance, the R&D manager must comment on the utility of the intelligence product which he has initiated in order that the intelligence manager will have the information needed to improve product quality.

25X1 3.5 ☐ Unfortunately, the cycle shown in Figure 3.1 is often not started. In those instances where it is begun it is usually not completed. The failure to involve the R&D user and to be responsive to his needs may be in contrast to the participation of some users in the upper levels of the Government. From the proper vantage point and with exceptional experience and skills, it is possible to make needs known, to ensure production, and to critique the resultant effort so as to ensure improvement. There is no Community-wide system, however, to do this for the "bench" level. Rather, the study found that there is, in effect a producer-user gap in S&TI support to R&D.

No Community-Wide System of Support to R&D

25X1 3.6 ☐ Intimately related to the failure to involve the R&D user in the S&TI cycle is the lack of a Community-wide system for providing S&TI support to R&D. Effective management tools based on precise correlation of the S&TI and R&D programs have not been instituted. Because both programs are well-documented such correlation would be possible at low cost.

Existing System for One Command in One Service

25X1 3.7 [] An effective management system based on correlation of R&D and S&TI programs has been developed and tested at a single command within one Service. It will be outlined in Section IV, "Additional Findings of Fact", and described in detail in Appendix D, "DARCOM System for S&TI Support to R&D". This system, if adapted for use throughout the S&TI and R&D communities, would eliminate all deficiencies brought out by this study. At present, however, the lack of a general system inhibits full cooperation among the several S&TI production agencies and is a barrier to effective S&TI management at all levels.

SUMMARY OF DEFICIENCIES

25X1 3.8 [] The following summary sentences highlight deficiencies in S&TI support to R&D identified by the study as resulting directly from the two major problems discussed in paragraphs 3.2-3.7:

- Needs of R&D users are not systematically stated
- The scientific and technical intelligence system is not sufficiently responsive to R&D users
- Users in the R&D Community of specific S&TI products are not known to intelligence managers or producers
- Distribution of finished intelligence is faulty. Users often do not receive needed, expensively-produced documents. Many receive unneeded documents

- R&D users have no means of commenting on the adequacy of intelligence products in a manner that causes change
- There are inadequacies in the selection, training, and guidance of personnel who provide S&TI support to R&D at the local level.

Each of these six deficiencies, or symptoms of systems failure, is amplified briefly in the following paragraphs.

R&D User Needs Not Stated

25X1 3.9 ☐ Current practice does not result in a systematic canvassing of managers of approved and funded R&D programs to determine their requirements for S&TI. More importantly, there is no generally-applied rational method for determining intelligence gaps which will impact adversely on R&D programs. The problem is not the magnitude of the task of ascertaining user needs, for it is within the capacity of currently available resources. The problem is a failure to approach this deficiency in a planned and orderly way.

S&TI Community Unresponsive to R&D

25X1 3.10 ☐ In the absence of well-defined user needs, the S&TI Community can present only an unresponsive appearance to managers of R&D projects and tasks. The appearance in most cases is real, for the R&D user lacks the knowledge to make the existing system work for him.

S&TI Producers Do Not Know R&D Users

25X1 3.11 ☐ There is now no Community-wide managerial tool which will display for individual analysts and intelligence managers

the readership of their publications in the R&D Community. In the absence of such definitive displays, it is not possible to know whether or not a publication is widely used in support of significant work. Not knowing who the users are and their locations means the producer-user gap cannot be closed.

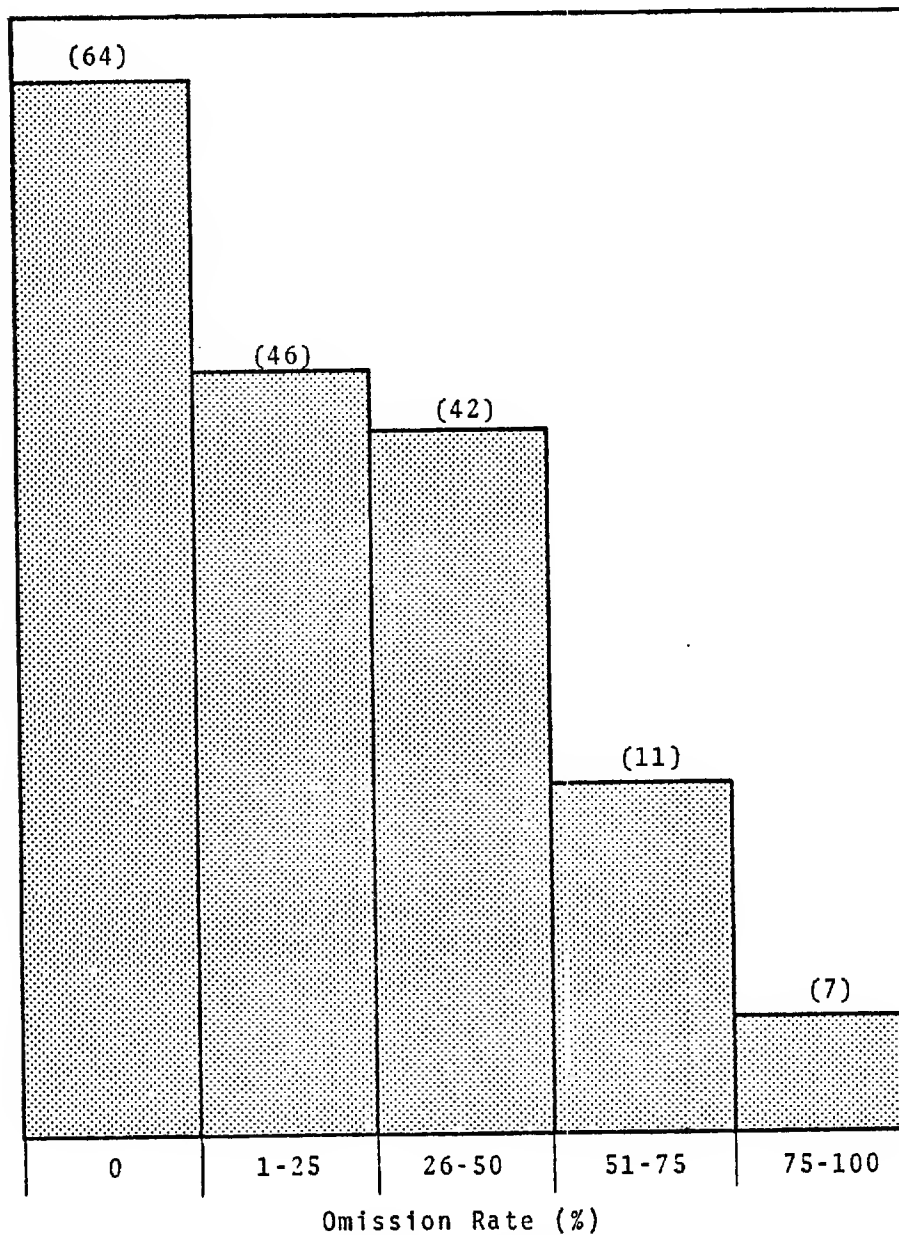
Inaccurate Distribution of S&TI Publications

25X1 3.12 ☐ A survey^{1/} of 170 S&TI studies showed that 106 of them had distribution lists which omitted one or more R&D users in DARCOM alone who had stated a need for the publication. At the same time a total of 503 individual copies of S&TI documents in the sample were sent to DARCOM R&D activities which had no interest in them. The results of this survey are shown in Figure 3.2 "Distribution Problems: Omission of Key R&D Users". Note that the omission rate was over 25% in 60 cases out of 170. While it is undesirable to print more publications than needed and to burden distribution, accounting, and storage facilities with them, the more important problem is the failure to place expensively-produced publications in the hands of R&D managers who need them.

Ineffective Evaluation of S&TI by R&D Users

25X1 3.13 ☐ There are no systematic arrangements applicable throughout the S&TI and R&D Communities for critically evaluating publications so as to improve subsequent editions or revisions. The practice of using tearout sheets has proven of

^{1/} The survey examined 170 S&TI publications from production agencies of all three Services. Only DARCOM addresses could be examined for distribution failures. No other command in any Service has management tools that allow a similar examination.



Note: 1. Sample of 170 publication distribution lists.
2. 503 copies sent to DARCOM users who had no need.

FIGURE 3.2
DISTRIBUTION PROBLEMS: OMISSION OF KEY R&D USERS

little value, since the job can be assigned to almost anyone. In practice the comments seldom are made by a key user. Product evaluation wherever possible should include a producer-user interface. If most users of a given S&TI product are adjacent to one another, lead S&TI analysts should confer with them to ensure product responsiveness. Owing to the difficulties in identifying users cited earlier, face-to-face evaluation is now seldom possible.

Personnel Inadequacies at Local Level

25X1 3.14 [] The producer-user gap cannot be closed unless the R&D Community has good intelligence support at the local level. For example, it is not possible for one or two professional level personnel with one to two clerks to support a major R&D activity. Yet, this was determined to be a relatively common situation. Moreover, S&TI support to R&D demands a high degree of professionalism which is best gained through rigorous training, good managerial control at upper levels, and experience. In the absence of these three, it does not follow that an individual who was reasonably competent in another field will do an acceptable job in providing S&TI support to R&D managers.

25X1 3.15 [] In the absence of competent local-level intelligence support, R&D managers often devote an inordinate amount of time attempting to acquire adequate S&TI. It is more economical to devote sufficient specialized manpower to do the S&TI job properly. A relatively small investment in intelligence manning and training at the local level results in improved productiveness for all R&D personnel at the Command.

ISOLATION OF PRODUCTION AGENCIES

25X1 3.16 [] In paragraph 2.5 it was pointed out that Intelligence Production Requirements (IPRs) originating in Navy or Air Force organizations are usually passed directly to the Service production agency and not to DIA. This is a problem area, for if one Service does not advise the other two of its production program there is certain to be undesirable duplication. The process of registering an R&D-originated IPR with DIA and subsequent DIA publication of a covering S&TI task means that the R&D activities of all Services will be aware of the task and the resultant product. Thus, those R&D activities having similar S&TI needs are spared the problem of submitting duplicative IPRs.

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IV. ADDITIONAL FINDINGS OF FACT

25X1 4.1 [] In addition to the problems and deficiencies described in Section III, the study made four findings which should be of use to decisionmakers concerned with S&TI support to R&D. These findings are summarized in the following paragraphs.

S&TI SUPPORT TO R&D IS BIG BUSINESS

25X1 4.2 [] To support the [] dollar DoD R&D program, the 1978 Intelligence Community budget devotes upwards of [] personnel and [] to S&TI. Estimates of these S&TI costs are shown by program in Table 4.1.

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25X1 4.3 [] Table 4.2 shows resource requirements for the DoD S&TI production agencies. This table gives personnel and funding costs devoted to preparation of finished intelligence. This portion of the S&TI effort requires over [] personnel and nearly [] dollars of funding annually. Shown in Table 4.2 are resource requirements for S&TI production by the Defense Intelligence Agency Directorate for Scientific and Technical Intelligence (DIA/DT); the Army Foreign Science and Technology Center (FSTC); the Army Missile Intelligence Agency (MIA); the Army Medical Intelligence and Information Agency (MIIA); the Naval Intelligence Support Center (NISC); and the Air Force Foreign Technology Division (FTD).

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IMPACT OF R&D REQUIREMENTS ON COLLECTION COSTS

25X1 4.4 [] The largest and most demanding user of S&TI is the R&D Community. Its requirements demand specificity and detail in analysis to a much greater degree than do those of most other users. Acquiring the intelligence information or basic data to produce detailed analyses in support of R&D is difficult and expensive. Costs of collection systems can rise exponentially when relatively small increases in capability are specified.

COMPREHENSIVENESS OF R&D REQUIREMENTS FOR S&TI

25X1 4.5 [] At the inception of the study the assumption was made that if the S&TI needs of R&D were met, then S&TI products would exist which would satisfy the needs of all users at all levels. This view is intuitively satisfying. It was tested at all S&TI and R&D focal points visited. ^{1/} There was universal agreement with this assumption based on a variety of experience.

25X1 4.6 [] The conclusion reached is that there are no unique S&TI questions asked at the upper levels of Government. They have all been surfaced at the R&D "bench" and/or project manager level. On the other hand, the range and depth of S&TI questions asked by the R&D Community exceeds those asked by other users. For this reason the real prime movers in S&TI should be the "bench" and project manager level R&D users.

MODEL SYSTEM FOR CLOSING PRODUCER-USER GAP

25X1 4.7 [] The most salient finding of this study is that problems described in Section III, "Community Problems and Deficiencies", are tractable and amenable to solution. In fact, one

^{1/} See Appendix A, "Organizations Visited and Persons Interviewed".

command in one Service ^{2/} has developed a system that deals effectively with all the problems cited in Section III. An overview of this system is presented in the following paragraphs. For a more definitive description of this management tool for closing the gap between the S&TI producer and the R&D user, see Appendix C, "DARCOM System for S&TI Support to R&D".

Explicit Link at Local Level

25X1 4.8 [] A key feature of the DARCOM management system for S&TI support to R&D is the precise correlation of S&TI and R&D programs. This is done initially at the local level by the intelligence officer in consultation with managers of R&D projects or tasks. By local level is meant an R&D command or a laboratory. In the DARCOM system there are a total of 21 local intelligence offices at commands or laboratories 15 of which are currently required to correlate S&TI and R&D programs. It is estimated that there are about 12 offices in the Navy Material Command and about 10 in the Air Force Systems Command which equate to the 15 in DARCOM.

25X1 4.9 [] The 15 DARCOM local intelligence officers work directly with R&D managers so that the latter know what S&TI is available to support each element of the local R&D program. Intelligence gaps are identified and production requirements prepared to fill the gaps. Plans are made jointly to evaluate publications which are important to the R&D program. After this stage the local intelligence officer has definitive documentation on the local R&D program, related S&TI, new production needs, and evaluation requirements. Most importantly, the R&D manager is aware of what S&TI is already available and what will be available in the future.

^{2/} The U.S. Army Material Development and Readiness Command (DARCOM).

Data Developed for Use at All Levels

25X1 4.10 ☐ The basic data developed at the local level are forwarded to DARCOM HQ where they are machined to provide a series of "sorts". These sorts provide displays of the basic information for use by analysts, producers, managers, and users of S&TI. Illustrative examples are given in the following paragraphs to show how the basic data and sorts are used as management tools.

25X1 4.11 ☐ Table 4.3, "S&TI Tasks Supporting Individual Commands" is one of eight pages from the submission of the local intelligence officer at the Harry Diamond Laboratory. The first column lists individual tasks in the DIA S&TI program. The second column indicates the priority of interest assigned by the manager of the R&D effort shown in the third column to the product of the S&TI task. The fourth column gives the title of the R&D project and the fifth column lists the Command abbreviation. In Table 4.3, for purposes of illustration, a frame has been drawn around all data pertaining to R&D project AH44. Note that the local intelligence officer and the manager of AH44 can see at a glance that there are nine tasks in the DIA S&TI production program that support this R&D effort. Two S&TI tasks have been assigned priority A by the user and, therefore, will be evaluated.

User Identification

25X1 4.12 ☐ Table 4.4, "R&D Efforts Supported by Individual S&TI Tasks", illustrates how the DARCOM system enables the S&TI producer to know his users. The column headings are identical to those of Table 4.4, but in this sort S&TI tasks are correlated with R&D projects which they support. For example, all data in the box relate to DIA S&TI task number PT-1820-22-75, the title

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of which is "Physics Research For Improved Military Systems-- Foreign". The producer of that publication can see at a glance who his users are, where they are located, what they will use the S&TI for, and how important they consider the S&TI. The local intelligence officer can use this display to ensure accurate product distribution. At a glance, the intelligence officer at TA-ADCOM, for example, can see that he must provide for 11 users.

Accurate Distribution

25X1 4.13 [] The distribution problems associated with S&TI publications were discussed in paragraph 3.12. The sort shown in Table 4.5, "Intelligence Support Tasks By Command", lists where products of each S&TI task should be sent in DARCOM. Thereafter, each local intelligence officer makes distribution to individual R&D managers as indicated in Table 4.4.

High-Priority Association of S&TI and R&D Tasks

25X1 4.14 [] Table 4.6 shows one page from the sort that lists DIA S&TI program tasks having priority A associations with R&D tasks. The reader should keep in mind that a priority A association means that the R&D manager considers that the S&TI task calls for production of data vital to his project. It also means the R&D manager will submit an evaluation of the S&TI product. The three publications shown with large readership all happen to relate to the same kind of foreign systems. The producer of these publications can quickly see that he has 39 A-priority users at two locations. Analyst-user conferences can be facilitated by such displays, and prepublication tailoring of the publications to enhance their utility can be arranged easily.

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Next 1 Page(s) In Document Exempt

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Few Resources Required

25X1 4.15 [] Several other useful sorts are available for the S&TI manager using the basic data developed at the local level. It should be stressed that the collection and machining of these data do not require significant resource expenditures. First of all, the two programs (R&D and S&TI) to be correlated are already well documented. Secondly, the initial step of relating them at the local level and identifying gaps is part of the local intelligence officer's job. If he doesn't do it, he is not carrying out a basic function. The DARCOM system merely calls for him to do it in an orderly, logical manner. Thirdly, each local intelligence officer has only a manageable portion of the effort. And, fourthly, the data can be assembled and machined routinely and at modest cost.

CIA S&TI PRODUCTS IN SUPPORT OF R&D

25X1 4.16 [] The CIA S&TI program could be of considerable value to the DoD R&D program. Evidence available for this study indicates that a large number of high-quality publications are produced annually, many of which could be of value to R&D managers. But the CIA as producer is almost completely shielded from users in the DoD R&D community. Publications that the CIA adjudges to be of possible use in DoD are forwarded in bulk to DIA, but the latter agency, for reasons cited in Section III, "Community Problems and Deficiencies", cannot make accurate distribution. Moreover, since the CIA does not publish its S&TI production program it is not possible for DoD users to know in advance what will be available and to place orders. In the absence of better documentation of the CIA program, there would appear to be a high likelihood of expensive, undesirable duplication between the CIA and DoD S&TI programs. There is almost a certainty that many potential

users in the DoD R&D community do not have access to CIA products that would improve the process of weapon system selection and development.

V. RECOMMENDATIONS

SUMMARY

25X1 5.1 [] The discussion and analyses in the preceding four sections lead to eight principal recommendations. They are presented in the following summary sentences and then briefly discussed in succeeding paragraphs.

- Develop a DoD-wide data base of S&TI/R&D associations
- Overhaul system for developing distribution lists
- Arrange for effective product evaluation
- Assess utility of all S&TI products to determine which should be combined, eliminated, or reformatted
- Train local intelligence officers in techniques of intelligence support to R&D
- Promulgate CIA S&TI task catalog similar to DIA's
- Review CIA S&TI tasking procedures to improve awareness of and response to DoD R&D needs
- Monitor Community system for S&TI support to R&D and assess wider applicability.

DATA BASE OF S&TI AND R&D ASSOCIATIONS

25X1 5.2 [] The DARCOM technique of correlating S&TI and R&D programs, discussed in paragraphs 4.7-4.15 and in Appendix C, should be adapted and used by all three Services and the DIA. Doing so would result in one manageable data base for use by DoD S&TI managers to eliminate wasteful duplication. This data base could then be sorted to provide displays needed by S&TI management to make program decisions. A DoD-wide data base of S&TI and R&D associations would enable S&TI managers in one Service to clearly see who their users are, in other Services as well as their own.

DISTRIBUTION LISTS FOR S&TI PUBLICATION

25X1 5.3 [] From a DoD-wide data base it is a simple matter, as discussed in paragraph 4.13, to prepare accurate distribution lists down to the command level. The basic data prepared at each command permits the local intelligence officer to distribute publications accurately at the R&D program manager and "bench" level.

PRODUCT EVALUATION TO IMPROVE S&TI PUBLICATIONS

25X1 5.4 [] In preparing the data base each local intelligence officer in coordination with R&D managers will have determined which products are important enough to require evaluation and who should logically make the evaluations. The product critiques which result should be monitored and combined at intermediate levels for forwarding to DIA. That agency should integrate evaluations from all three Services to improve individual products and the overall S&TI production program.

UTILITY OF S&TI PRODUCTS

25X1 5.5 [] Displays of priority associations assigned by R&D users to S&TI products and insights derived from the evaluation process will provide S&TI managers with the bases for program review. Managers should then assess where overlap exists so that publications can be combined. Duplication will be clearer, enabling decisions to eliminate some products. And, where comments so indicate, publications can be reformatted for more effective presentation.

PROFESSIONALISM OF LOCAL INTELLIGENCE OFFICERS

25X1 5.6 [] A careful survey throughout the S&TI and R&D Communities is warranted to ensure that an adequate number of trained intelligence professionals is supporting the very important R&D program. As discussed in paragraph 3.15, if inadequate resources are devoted to S&TI support to R&D, the managers in the latter field often are forced to expend manpower resources wastefully and still get an inferior intelligence product. This recommendation does not call for significant manpower shifts. It calls for a careful survey and analysis which would likely result in a few additional intelligence billets and the inauguration of a special short training course at the Defense Intelligence School.

CIA S&TI TASK CATALOG

25X1 5.7 [] This recommendation calls for a structured listing of the CIA S&TI production program so that it can be related to that of DIA. If unneeded duplication were made apparent it could be eliminated. More importantly, the CIA S&TI production program could be correlated with the DoD R&D program in a structured way to the betterment of the processes of weapon system selection and development.

CIA TASKING PROCEDURES

25X1 5.8 ☐ A survey and analysis should be made of CIA S&TI tasking procedures. Of particular interest would be conclusions reached concerning the possibility of being more responsive to R&D needs while still fulfilling currently assigned missions and functions.

COMMUNITY SYSTEM FOR S&TI SUPPORT TO R&D

25X1 5.9 ☐ In the aggregate the foregoing eight recommendations do not call for a new system. They call for making the present system work by providing management with adequate tools. These tools would enable management to see and understand its users in the R&D Community. To see that this is done evenly, effectively, and equitably, there should be an implementation and coordination committee for S&TI support to R&D.

25X1 5.10 ☐ The implementation and coordination committee should have two functions: (a) to monitor the progress of the preceding seven recommendations and (b) to assess the wider applicability throughout the intelligence community of the measures taken to improve S&TI support of R&D. The committee should be chaired by a member of the Intelligence Community Staff and have the following additional representation:

DDR&E	- member
DIA	- member
CIA	- member
DARCOM	- observer
NAVMAT	- observer
AFSC	- observer
ACS(I)/DA	- observer
ONI/NAVINTCOM	- observer
AFIN	- observer

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APPENDIX A
ORGANIZATIONS VISITED AND PERSONS INTERVIEWED

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APPENDIX B
DISTRIBUTION SHORTFALLS AND WASTE

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APPENDIX B
DISTRIBUTION SHORTFALLS AND WASTE

BACKGROUND

25X1 B.1 [] The problem of document distribution is addressed from various viewpoints in several portions of the body of the report. This Appendix provides detailed substantiation for those entries. Additionally, it documents a comprehensive analysis by the study team of inadequacies in existing provisions for distribution of S&TI publications in support of R&D.

SUMMARY OF COMMENTS FROM REPORT

25X1 B.2 [] In Section II, "Current System for S&TI Support to R&D", paragraph 2.7 states in part:

"The frequency of complaints concerning the kind and volume of documents received by customers and the apparent high error rate in S&TI document distribution lists indicate that the distribution system is in need of corrective work."

"The efforts expended in the submission and satisfaction of IPRs and in the development of a good SII are wasted unless the S&TI product reaches the real customer. Unfortunately, it appears that the ultimate distribution step--that from the command/laboratory to the responsible R&D individual--often is not taken. Local document distribution is often planned poorly or not at all. If the requestor never sees the product of his request, it cannot be used. If it's never used, the total effort is wasted. If only part of the potential users see an S&TI product there is still wasted effort."

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25X1 B.3 ☐ Paragraph 3.12 in the body of the report discusses over-distribution as well as under-distribution. It contains the following sentence, "While it is undesirable to print more publications than needed and to burden distribution, accounting and storage facilities with them, the more important problem is the failure to place expensively-produced publications in the hands of R&D managers who need them."

COST OF S&TI PUBLICATIONS

25X1 B.4 ☐ The real value of S&TI publications can be measured only in relation to the funding of the DoD R&D effort--a program to which is devoted ☐ annually. Those resources cannot be allocated in the most cost-effective way unless R&D managers at all levels are well informed on: (a) the relevant foreign state of the technological art and (b) the capabilities of foreign systems which can counter, or must be countered by, the U.S. system under development. S&TI publications provide this information data base for current and future time frames.

25X1 B.5 ☐ Table B.1 shows that the Intelligence Community budget for 1978 allocates in excess of ☐ military and civilian 25X1A personnel and ☐ for identifiable S&TI costs. 25X1A These figures derive from CIRIS (Community Intelligence Resources Information System) and are broad estimates. Included in the amounts shown in Table B.1 are those portions of most major collection and production programs which support S&TI. These overall costs are high because collection and processing of S&TI is in response to demanding requirements by R&D users for detail and specificity.

25X1 B.6 ☐ Fairly precise estimates can be made for the resource requirements for the DoD S&TI production agencies as shown in

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Table B.2. The figures given in this table are numbers of personnel and total costs devoted to the preparation of finished intelligence. The resources required annually for S&TI production agencies--over [redacted] do1- 25X1A
lars--support both the planned production effort (publications) and quick-reaction tasking (QRT). The larger portion is devoted to the planned production effort. Parenthetically, the study team gained the impression that if the planned production effort were more rationally planned and managed, there would be less need for QRT, but this hypothesis was not analyzed in detail and cannot now be documented.

25X1 B.7 [redacted] The DIA Catalog of Approved Scientific and Technical Intelligence Tasks (CAST), DST-MGB-A-001-76-Vol 1, of 31 January 1977, lists about 350 tasks. Over 300 of these result in finished publications. These publications form the core of the planned production effort and, therefore, consume the largest portion of the budgets for production agencies. By any standard each of these publications is expensive. It is worth managerial effort to ensure that they are placed in the hands of R&D personnel who need them.

ANALYSIS OF DISTRIBUTION

25X1 B.8 [redacted] In light of the costs which can be associated with S&TI publications and their value to R&D programs, an analysis was made of the existing distribution arrangements.

Method

25X1 B.9 [redacted] The objectives of the analysis were to determine:
(a) if R&D users who had stated a need for a publication actually received it and (b) if the publication was received at commands

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which had no need for it. Although distribution lists are included in all S&TI publications, the only firm data on stated user needs are contained in one of the sorts of the DARCOM "Master List." ^{1/} One of the pages from this sort is shown as Table B.3, "Intelligence Support Tasks by Command." Individual DIA Tasks are listed in the left column, while commands and laboratories which have stated a need for the publication resulting from the task are shown in the second column. This sort or printout is comprehensive in that it shows every command or laboratory having one or more requestors of a given publication. But the printout is also restrictive in that only bona fide requestors appear on the list.

25X1 B.10 [] The study team compared the distribution lists of 170 publications with the firm data in the entire printout, "Intelligence Support Tasks by Command." It must be stressed that only DARCOM addressees on distribution lists were examined, because documentation does not exist on stated user requirements for other commands in any of the Services.

Results

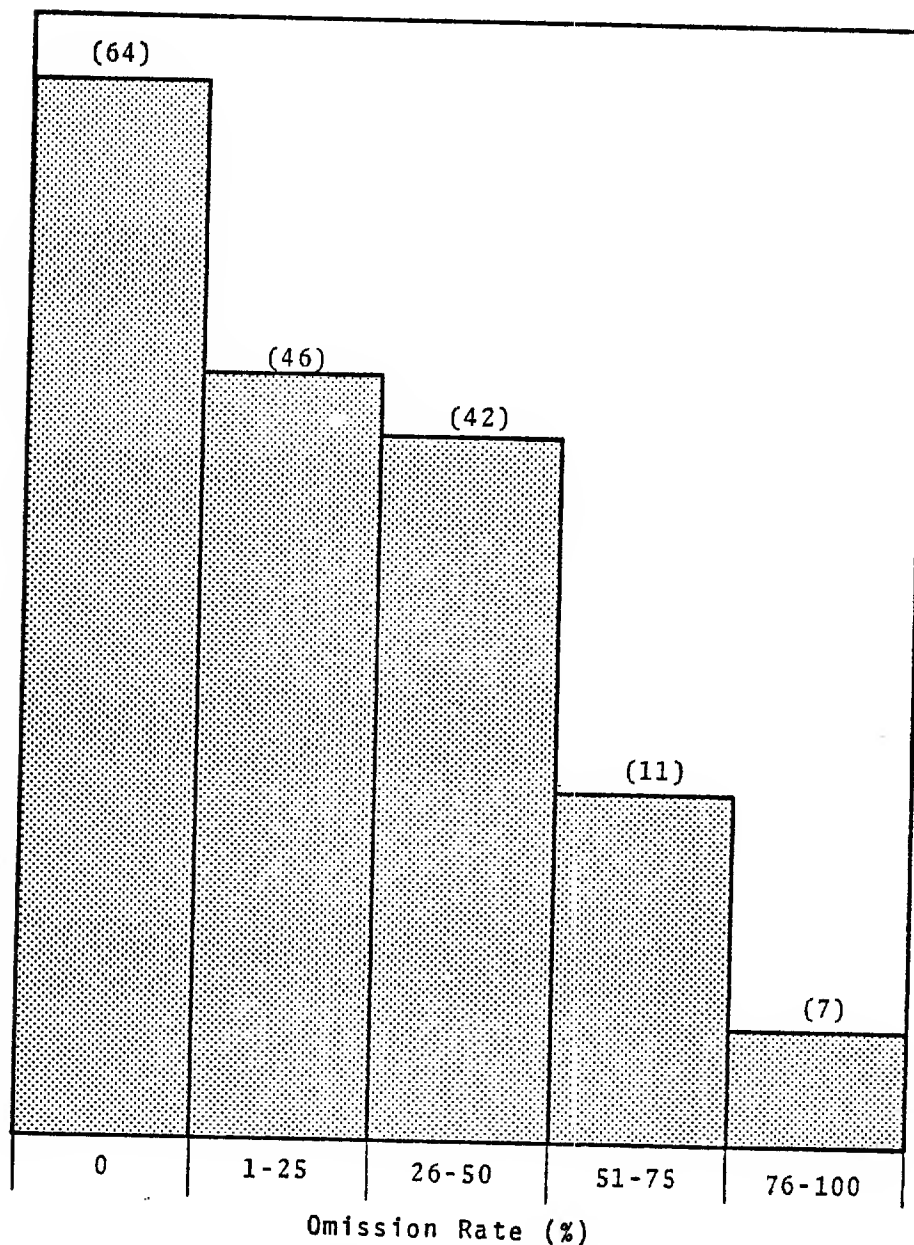
25X1 B.11 [] An overview of the results of the comparison of user requests and distribution lists is shown in Figure B.1. The numbers in parenthesis at the top of bars show the quantity of publications in a given omission rate category. The numbers at the bottom of the bars show omission rates. Thus, Figure B.1 indicates that of 170 publication distribution lists examined there were only 64 instances where all R&D users who had a stated need received the publication in question. In contrast, there were

^{1/} For details of the DARCOM "Master List" see Appendix C, "DARCOM System for S&TI Support to R&D."

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Note: 1. Sample of 170 publication distribution lists.
2. 503 copies sent to DARCOM users who had no need.

FIGURE B.1
DISTRIBUTION PROBLEMS: OMISSION OF KEY R&D USERS

errors of omission in 106 cases. In 46 cases these errors were as high as 25%. In 42 cases the omission rate was between 26% and 50%; in 11 cases between 51% and 75%; and in 7 cases between 76% and 100%. A total of 503 copies went to users who had no need for them.

25X1 B.12 ☐ It must be emphasized again that only the DARCOM addressees on distribution lists were examined, because documentation does not exist on user requirements for other commands in any of the Services. And, since DARCOM has done much to regularize its arrangements for distribution of S&TI publications, it can be safely assumed that distribution error rates are considerably higher for other activities.

CIA S&TI Publications

25X1 B.13 ☐ Preliminary inquiries were made into the means used to place CIA S&TI publications in the hands of DoD R&D users. Two approaches are used: (1) if CIA analysts are personally aware of DoD activities having an interest in a given study, it will be distributed to those activities or (2) bulk distribution will be made to DIA for further dissemination to DoD R&D activities. Based on the analysis of distribution failures for products of the DIA Tasking System, it is certain that CIA S&TI publications are maldistributed within DoD. There are no arrangements now for informing DoD R&D managers of CIA S&TI publications of value to their programs. Therefore, DoD R&D users cannot state their needs.

CONCLUSIONS

25X1 B.14 ☐ From the analysis of DIA tasks, identified users, and distribution failures, the following conclusions result:

- The system for developing distribution lists needs overhaul
- Stated user needs should be the basis of any distribution list
- S&TI publications should be distributed to the command/laboratory level where individual user requirements should be maintained
- CIA S&TI publications should be rationally distributed in DoD based on stated R&D user needs for them.

APPENDIX C
DARCOM ^{1/} SYSTEM FOR S&TI SUPPORT TO R&D

INTRODUCTION

Purpose

25X1 C.1 ☐ The purpose of this Appendix is to describe the DARCOM system for S&TI support to R&D in sufficient detail so that interested readers in other organizations can adapt it for their own purposes. The explanation in this Appendix expands considerably on that provided in paragraphs 4.7-4.15 in the main body of the report, but it is still an abstraction and simplification of the actual DARCOM program.

25X1 C.2 ☐ The paragraphs which follow place heavy emphasis on those aspects of the DARCOM system which have Community-wide application. Any reader who wishes further specific documentation or a detailed briefing should contact:

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Intelligence Community Staff
Phone: ☐

STATINTL

Definition

25X1 C.3 ☐ The DARCOM system for S&TI support to R&D is an aggregation of management techniques aimed at optimum use of

^{1/} DARCOM (U.S. Army, Material Development and Readiness Command).

intelligence production resources in support of approved and funded R&D efforts. It has the following distinctive features:

- It is simple and straightforward. Therefore it does not require a burdensome allocation of resources.
- The S&TI and R&D programs are correlated in a rational, systematic manner so as to provide a data base of great value to all levels of the Intelligence and R&D Communities.
- The data can be manipulated easily to provide direct and uncomplicated "sorts" on which to base intelligence management decisions regarding such things as production, distribution, and product improvement.
- The user is directly involved, particularly in the requirements and evaluation phases of the intelligence cycle. As a result he has an indirect but important impact on the production and dissemination phases as well.
- The role of the local intelligence officer at the command or laboratory is given balanced emphasis. In other systems this key link is often neglected.
- It makes the S&TI system dynamic. It ensures that discrete events such as statements of requirements and evaluations take place oftener. Time for response to production requests is compressed. Management decisions for beneficial change to S&TI programs are speeded up. The system is improved constantly.

BACKGROUND

25X1 C.4 [] DARCOM and its predecessor, the Army Material Command, have long had local intelligence offices ^{2/} (FIOs) at development commands and laboratories. The main function of the FIO is provision of threat and intelligence in support of the material acquisition process. The carrying out of this function has evolved from haphazard to systematic as a result of the below-listed milestones:

1968-1969 A study identifies lack of program documentation as the basic weakness of the FIO system and the principal bar to systematic functioning.

1970 Corrective actions begun. Concept advanced that intelligence is integral part of R&D.

1971 Requirement established to provide FIOs at each command and separate laboratory with documentation of R&D program. FIOs required to provide full spectrum of intelligence support to listed R&D projects and to report regularly on the support.

1973 "Master List" developed which correlates available and programmed intelligence with support requirements for R&D programs. This process identifies intelligence gaps and induces submission of Intelligence Production Requirements (IPRs).

1974-1976 Refined version of "Master List" produced.

^{2/} The DARCOM designation for the local intelligence office is Foreign Intelligence Office (FIO).

1977 Third and current version of "Master List" produced, including an uncomplicated but effective priority rating. This rating assists managers of individual R&D efforts in systematically examining the utility of S&TI products and in weighting them in relation to ongoing work. These priority assessments are then relayed to the several levels of S&TI management.

OBJECTIVES OF DARCOM SYSTEM

25X1 C.5 The DARCOM system for S&TI support to R&D has the following general and specific objectives:

- General
 - To function within and as an integral part of the Defense Intelligence System. In fact, it has been aptly characterized as an approach to make that system work
 - To close the gap between S&TI producers and R&D user
 - To provide S&TI and R&D management at whatever level with the management information required for planning and decision making
 - To make response to intelligence needs timely and certain
- Specific
 - To correlate R&D projects with supporting S&TI tasks
 - To identify and fill intelligence gaps relative to R&D projects

- To make complete and accurate distribution of S&TI products to R&D users
- To prioritize or weight S&TI products from the vantage point of the R&D user
- To improve products by meaningful evaluation.

ORGANIZATIONAL STRUCTURE

25X1 C.6 ☐ Figure C.1 shows the DARCOM organizational structure for S&TI support to R&D. The lower portion of the figure comprises R&D users of S&TI, laboratories and commands. Each of these R&D entities is supported by a Foreign Intelligence Office (FIO).

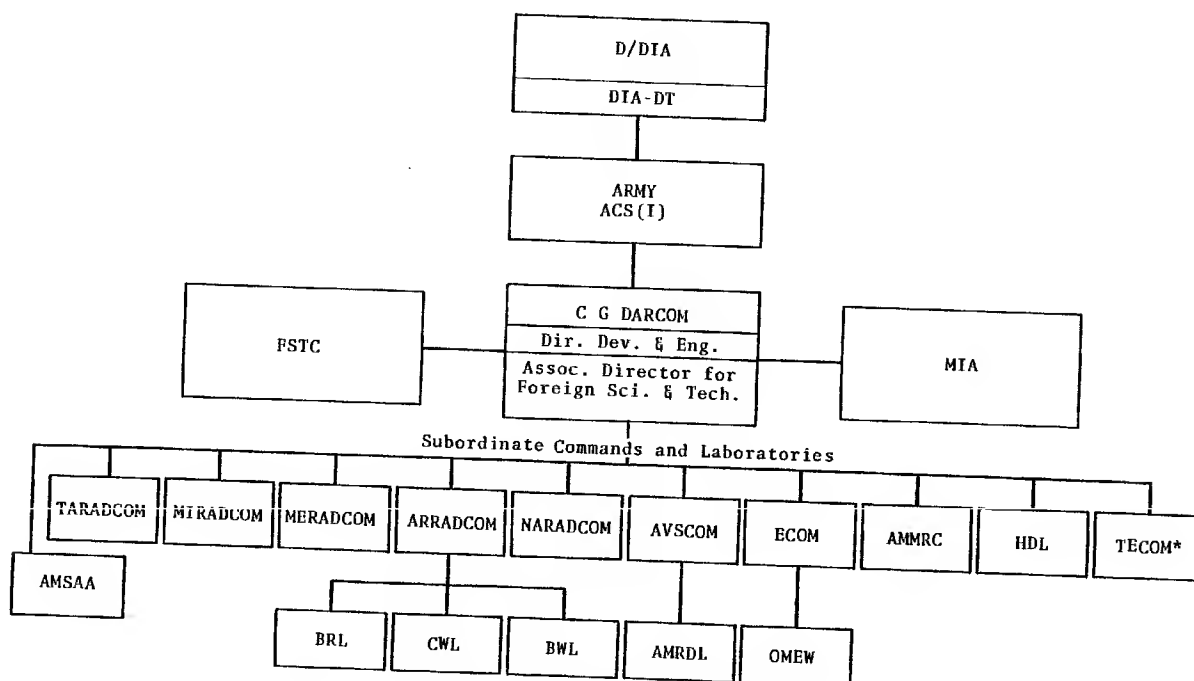
Tasking Response

25X1 C.7 ☐ A quick glance at Figure C.1 might indicate a time-consuming route for production requests and tasking between an FIO and DIA. Such is not the case. Production requests initiated by the FIOs, functioning as a bridge between the R&D and S&TI Communities, can be validated at the DARCOM level and levied on either the Foreign Science and Technology Center (FSTC) or Missile Intelligence Agency (MIA). This assumes, of course, that the task is within the mission of one of those two production agencies. Regardless of its tasking actions, DARCOM forwards the request to DIA through ACS(I). DIA has authority to task all production agencies.

25X1 C.7 ☐ Whether or not tasks are to be carried out by the Army production agencies, they are forwarded to DIA in order that the Community can be aware of ongoing intelligence production work through examination of DIA's Catalog of Approved S&TI Tasks (CAST). In this way duplication of effort can be avoided.

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* Subordinates of Test and Evaluation Command not listed.

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FIGURE C.1
DARCOM ORGANIZATION FOR S&TI SUPPORT TO R&D

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Potential Advantages

25X1 C.8 [] The organizational arrangements shown in Figure C.1 facilitate responsiveness to R&D needs in a planned, yet expeditious manner. These arrangements preclude repetitive use of Army S&TI production resources for duplicative tasks. By functioning as part of the overall DIA system, the Army organization derives the maximum benefits currently available from that system. Were the DARCOM approach used Community-wide, the benefits to Army R&D would be increased greatly. It follows that the balance of the DoD R&D Community would equally derive great benefits.

USER ORIENTATION

25X1 C.9 [] The DARCOM system for S&TI support to R&D looks to the principal customer, the manager of an approved and funded R&D effort. This is done with the clear recognition that there are other important users of S&TI. But it is manifest that if the legitimate needs of the R&D user are met, then there will exist the basis for satisfying the needs of all other users. ^{3/} By focusing on the stated requirements of the bona fide user, the DARCOM approach can eliminate production of publications which are analyst-initiated and do not have serious readership in the R&D community.

PREPARATION OF MASTER LIST

25X1 C.10 [] A salient feature of the DARCOM system for S&TI support to R&D is the systematic correlation of the S&TI and R&D programs. This is done by development of the "Master List of

^{3/} See paragraphs 4.5-4.6 in the body of the report for further justification of this assumption.

Associated R&D Tasks and Intelligence Tasks" which is commonly referred to as the "master list". By simple machine sorts of the master list it is possible to develop the basic management information needed at the several levels shown in Figure C.1.

25X1 C.11 ☐ It must be stressed at the outset that the preparation of the master list does not pose unusual burdens on intelligence and R&D personnel at any level. Rather it is a systematized way of carrying out certain of their responsibilities. Preparation of the initial master list requires only a review of the local R&D program and those portions of the S&TI program that are applicable. Thereafter, annual updates require only the entering of changes into the data bank.

25X1 C.12 ☐ The FIO at each development command and laboratory works directly with individuals responsible for R&D efforts to determine the relationship between those efforts and intelligence tasks as shown in the DIA Catalog of Approved Scientific and Technical Intelligence Tasks (CAST). There is seldom a one-to-one association of R&D and intelligence tasks. Nearly always, an intelligence task will relate to several R&D tasks. As a corollary, each R&D task is supported by several S&TI tasks.

25X1 C.13 ☐ The R&D representative is normally interested in only a very small percentage of total S&TI tasks. The review of these is not demanding. In relatively short order the FIO and the R&D representative can determine which S&TI tasks are supportive and to what degree. A determination can also be made if gaps exist so that Intelligence Production Requests (IPRs) can be submitted. If the R&D user indicates that the S&TI task contains vital information for his effort or if he submits an IPR, the association of the R&D and S&TI tasks is assigned an "A" priority and an evaluation of the product is considered mandatory.

USE OF THE MASTER LIST

C.14 [] The data prepared by all the FIOs is consolidated by DARCOM. It can be sorted to satisfy various needs, and displayed as computer printouts. Since these printouts display the data to provide management information at the several levels, each will be discussed separately. In each case, a single page of the printout is shown.

Printout Number 1

C.15 [] Table C.1 shows a single page from printout number 1, in this case a single page of an 8-page submission from the Harry Diamond Laboratory (HDL). While somewhat parenthetical, it is worth noting that an important laboratory was able to correlate all of its R&D projects and tasks with supporting S&TI in 8 double-spaced sheets.

C.16 [] Since similar formats are used for all printouts and since all derive from one data base, a detailed explanation will be given here of printout number 1 shown in Table C.1. Thereafter, only the salient features and significance of each printout will be given. In Table C.1 the left-hand column lists the S&TI tasks which support the R&D projects and tasks listed in the third column. The user-assigned priority shown in the second column is indicative of the importance of the S&TI task to the R&D effort in question. An "A" priority indicates that the S&TI task has vital information and that the intelligence product will be evaluated. A "B" priority is assigned if the S&TI task indicates that the value of the product cannot be determined in advance. A "C" priority is assigned to publications which are needed for background information. The third and fourth columns of Table C.1 provide the R&D project number and title respectively. The fifth

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column gives the command or lab symbol, in this case HDL for Harry Diamond Laboratory.

25X1 C.17 ☐ Printout number 1 is made up of the entire submissions of HDL and other commands and laboratories in the DARCOM system. These submissions, when consolidated, make up the DARCOM master list and also serve each FIO as its master list. Each FIO maintains his portion of this list on a current basis and submits annual updates.

25X1 C.18 ☐ For purposes of illustration, a frame has been drawn around all data pertinent to R&D project AH44 and related tasks in Table C.1. At HDL the FIO and the project manager of AH44 can see from this display that there are nine S&TI tasks supporting this specific R&D effort at HDL. Moreover, two have been assigned an "A" priority, meaning vital information and requiring an evaluation. This total printout provides an overview of each individual command and laboratory and of DARCOM as a whole.

Printout Number 2

25X1 C.19 ☐ Table C.2 shows a segment of a DARCOM master list sort which displays in sequence all R&D efforts throughout the command correlated with supporting S&TI tasks. It is a melding of all submissions from the FIOs. It provides excellent insights into how good the support is for each R&D project. While in most cases the effort on an individual R&D project is concentrated at one location, this printout shows the manager of R&D project D425 that support is being provided by FIOs at AVSCOM, BRL, and HQS ARRADCOM.

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Printout Number 3

25X1 C.20 ☐ Printout number 3 shown in Table C.3 is a sort which lists all R&D users in DARCOM of the products of given intelligence tasks. For purposes of illustration a frame has been drawn around all data relating to the users of DIA Task PT-1820-22-75, "Physics Research for Improved Military Systems--Foreign". It shows the producer of this publication precisely who his users are. It also enables the FIO to make accurate distribution of this intelligence product. As can be seen in Table C.3, the FIO at TARADCOM knows he has a total of 11 "customers" for this publication. He can order extra copies if needed and can notify all users promptly when the report arrives.

Printout Number 4

25X1 C.21 ☐ Table C.4 is the complete list of publications (tasks) assigned an "A" priority by one laboratory, in this case the Benet Weapons Laboratory of ARRADCOM. This display shows which publications must be evaluated and by whom. The FIO can plan his workload and can arrange inputs from R&D personnel with minimum demands on their schedules.

25X1 C.22 ☐ A valuable benefit from this printout is its use for checking clearance needs. If a priority A association is assigned to an all-source document, the FIO can take steps to ensure that billets are established.

Printout Number 5

25X1 C.23 ☐ Table C.5 shows one page from the entire DARCOM master list printout of priority A associations between R&D and S&TI tasks. Note that the R&D tasks are listed sequentially in the third column.

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Approved For Release 2004/03/18 : CIA-RDP83M00171R000500160001-5

Supporting S&TI tasks are shown in column one. The level of high value support for each R&D effort is clearly evident from this management information data.

Printout Number 6

C.24 ☐ Printout number 6, shown in Table C.6, is a sort which provides a summary of commands and laboratories that have shown a need for the products of given intelligence tasks. This simple, straightforward approach can eliminate the dangerous shortfalls and wasteful overages currently prevailing in intelligence document distribution. The producer need only distribute to the command or laboratory shown and the FIO can pinpoint the distribution based on other printouts such as printout number 3 (Table C.3).

Printout Number 7

C.25 ☐ Table C.7 is a sort of the DARCOM master list which enables S&TI managers to obtain a quick overview of development commands and laboratories that are supported by "Priority A" publications. It permits a systematic prepublication check with the FIOs to ensure that sufficient copies of the product of individual tasks have been ordered to permit rapid completion of product evaluation by users.

Printout Number 8

C.26 ☐ Printout number 8, Priority A Association of S&TI and R&D Tasks, is shown in Table C.8. Keeping in mind that A priorities are assigned by the user, the value of this display is clearly evident. In assigning priority A, each of the R&D users shown

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Approved For Release 2004/03/18 : CIA-RDP83M00171R000500160001-5

in the third column has evaluated the information in the publication as vital. For this reason he has stated, in effect, that he wishes to be involved in the intelligence cycle and will prepare an evaluation of the product.

25X1 C.27 ☐ Table C.8 illustrates how it is possible for the producer to know who are his most interested users. This aggregation of management information illuminates for the producer of three related publications (PT-1060-01, 05, and 07-75) that he has 39 A-priority users at two locations. This printout simplifies planning for face-to-face analyst-user conferences. Moreover, the S&TI manager in this instance knows he will receive the benefit of 39 evaluations of how well the products have responded to requirements. It is expected that the S&TI producer will take advantage of this situation and visit the two locations prior to preparation of the three reports. The FIOs will assemble the users and help with the conferences.

25X1 C.28 ☐ With management information of this quality, those in charge of S&TI need not make decisions under conditions of uncertainty. They can quickly determine who their key users are and can tell where to allocate their scarce resources.

Printout Number 9

25X1 C.29 ☐ Table C.9, "Non-Priority A Association of S&TI to R&D," is potentially one of the most valuable of the DARCOM master list sorts. Shown is a typical page listing individual S&TI products in the left-hand column, related to R&D tasks in the third column. Only B and C priority ratings are given.

25X1 C.30 ☐ With the insights provided by this management tool, those who are responsible for S&TI production can focus examination

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on individual products for which there is apparently less critical demand. Further analysis may show that data from several publications could be combined. Analysis may show that formats are being used which make products only marginally useful. It may even be that some products have high interest for a given group of intelligence analysts and are being produced at considerable cost, even though no one in the R&D community is particularly interested.

25X1 C.31 ☐ It must be kept in mind that the lack of "Priority A" interest does not necessarily mean that a product is not needed. It does serve to alert S&TI managers, however, that it may be a candidate for reformatting or possibly for elimination. It must also be kept in mind that the publication may serve a very useful purpose in some area other than R&D.

APPENDIX D
ORGANIZATION FOR S&TI SUPPORT TO R&D

GENERAL

25X1 D.1 ☐ The Intelligence Community organization for scientific and technical intelligence (S&TI) support to research and development (R&D) is shown in simplified form in Figure D.1. Although Figure D.1 is an abstraction, from which as much complexity as possible has been removed, it illustrates several important points:

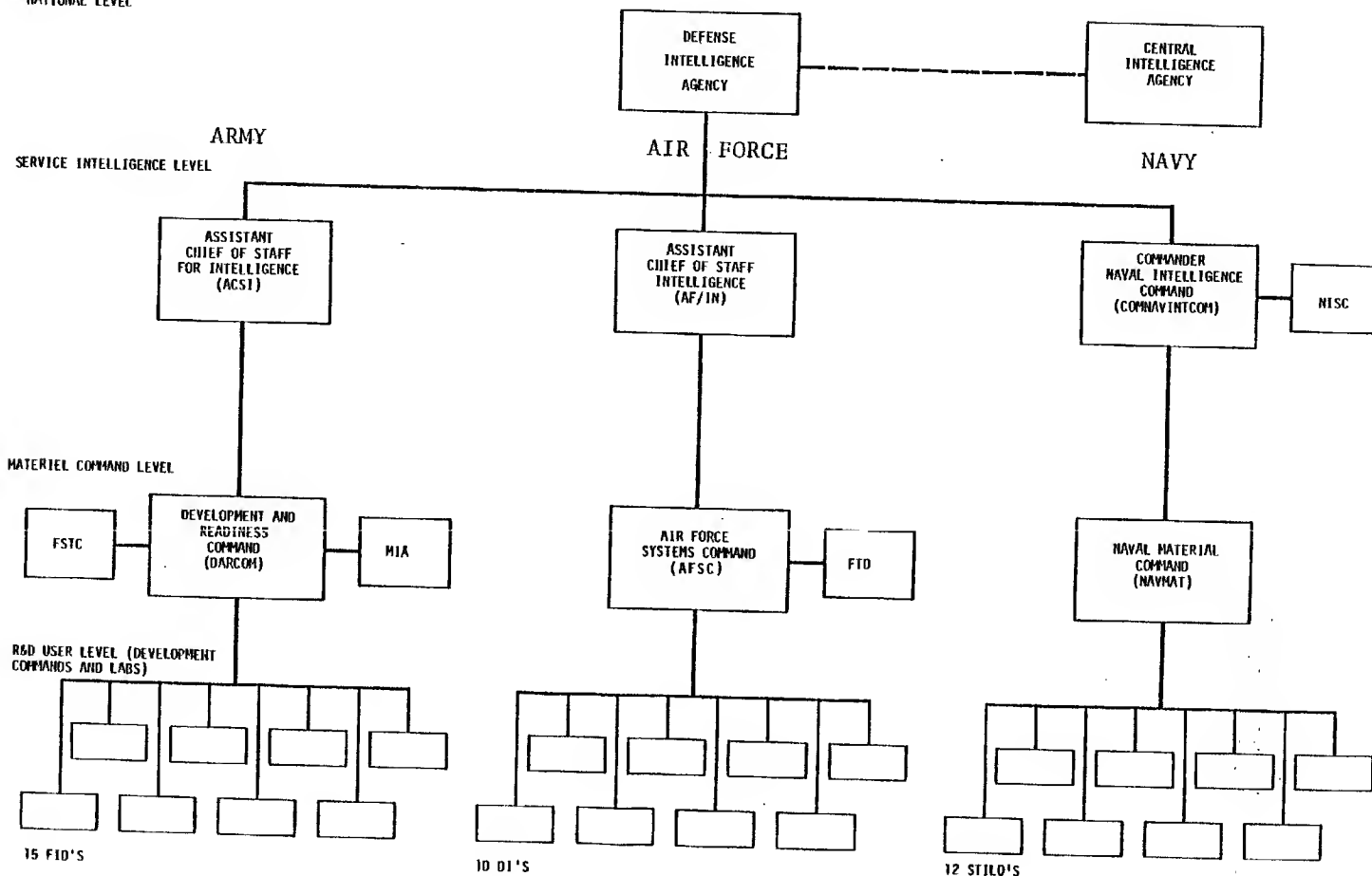
- There are four distinct levels (or strata) of S&TI management--national level, Service level, material command level, and R&D-user level
- There is considerable diversity among Service intelligence organizations for S&TI support to R&D
- The organizational structure is such that it is difficult to ensure that DoD R&D users benefit from CIA S&T efforts
- By organizational position the DIA is the only entity which can be a unifying force for rational and comprehensive S&TI support to DoD R&D
- Owing to the diversity of Service organizations; geographic dispersion of managers, producers and users; and the magnitude of S&TI and R&D programs, an efficient and uniform system is needed for S&TI support to R&D.

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NATIONAL LEVEL



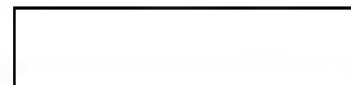
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FIGURE D.1

INTELLIGENCE COMMUNITY ORGANIZATION FOR SETI SUPPORT TO R&D
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NATIONAL LEVEL

25X1 D.2 ☐ At the national level there are two organizations with a responsibility for S&TI, the DIA and the CIA. In the area of S&TI, coordination between these two organizations is loose. There is not a clear understanding at CIA of how or where its S&TI products could be used by DoD R&D. Nor is DIA fully aware of the CIA S&TI production program and how and where it could be of optimum use to the Defense RDT&E program.

25X1 D.3 ☐ As indicated by the dotted line connecting DIA and CIA, the latter's S&TI effort is not directed at the R&D user. Rather CIA's effort is aimed at the upper reaches of government. This is proper, of course, but there remains the question of how much the DoD R&D effort would benefit if the CIA S&TI were rationally distributed to DoD R&D users.

25X1 D.4 ☐ In the past, elements of CIA maintained an active interest in direct support of some DoD R&D efforts. This has fallen into disuse. In any event, the support to DoD R&D was episodic rather than comprehensive.

25X1 D.5 ☐ As pointed out in paragraph B.13 of Appendix B, "Distribution Shortfalls and Waste," CIA generally gives bulk distribution to DIA of publications which the former deems of interest for DoD R&D. CIA thus depends on DIA for distribution in this area. For reasons detailed in Appendix B, DIA has only an imperfect knowledge of the needs of users throughout the organization shown in Figure D.1. This is especially true at the lower level--that of the R&D user of S&TI.

25X1 D.6 ☐ While documentation of the CIA S&TI production program is unavailable to DoD R&D users, documentation exists on the

DIA S&TI production program. This documentation includes the following:

- RIP--Register of Intelligence publications
- STIR--the Scientific and Technical Intelligence Register
- DIPS--the Defense Intelligence Production Schedule
- CAST--the Catalog of Approved Scientific and Technical Intelligence Tasks.

25X1 D.7 ☐ The most useful of these DIA documents for local S&TI support to R&D is the DIA CAST. At this time it is not available at many activities shown in the bottom area of the chart.

SERVICE INTELLIGENCE LEVEL

25X1 D.8 ☐ At first glance, Figure D.1 shows a deceptive symmetry of Service organizations for S&TI support to R&D. In actuality the approaches and outlooks vary greatly, as do the organizational structures which have evolved separately over a long period. One Service, the Navy, operates its S&TI production through a field command reporting directly to Naval Intelligence Headquarters. The other two Services have S&TI production organic to their material commands.

25X1 D.9 ☐ These and other differences tend to limit substantial S&TI coordination among the Services. The existing diversities, however, are not so great that it would be difficult to institute a comprehensive system for S&TI support to R&D.

MATERIAL COMMAND LEVEL

25X1 D.10 ☐ As shown in Figure D.1, both the Army and the Air Force maintain S&TI production organizations at the material command level. Navy alone does not. All three Services direct their local intelligence officers from this level.

25X1 D.11 ☐ Approaches to S&TI management vary greatly at the material command level, despite a common mission of ensuring intelligence support to the R&D user. The approaches range all the way from trying to make the DIA system work to doing the minimum possible within the system. Figure D.2 does not indicate channels of S&TI communication among the Service material commands, because these channels are largely informal.

R&D USER LEVEL

25X1 D.12 ☐ The boxes shown at the R&D user level are representational only. They and the numbers shown below the boxes are intended to represent those local intelligence officers who could logically be involved in relating S&TI and R&D programs to develop a community-wide "master list." The Navy, for example, at this writing has about 28 Scientific and Technical Intelligence Liaison Offices (STILOs) at systems commands and laboratories, but only 12 or so would have the function of correlating S&TI and R&D.

25X1 D.13 ☐ The development commands and laboratories are widely dispersed geographically. There is some concentration in the Washington, D.C., area and the Air Force has another concentration at Wright-Patterson AFB near Dayton, Ohio. In general, however, the boxes shown at the R&D user level denote local intelligence staffs which dot the map from coast to coast.

25X1 D.14 [] The diversity of these local organizations and their geographic dispersion are among the causes for, as stated in paragraph 2.2, ". . . considerable variation in resources, training, procedures and effectiveness." Yet, the local intelligence staffs are key factors in closing the gap between the S&TI producer and the R&D user. High returns can be expected for increased management attention to this area.

APPENDIX E
PRODUCT EVALUATION

NEED FOR REVIEW

25X1 E.1 ☐ Intelligence achieves consequence only when placed in the hands of a user who needs it to perform his mission. A corollary of this axiom is that the significance of intelligence can be determined only by a user in the light of his mission requirements. These principles apply to Scientific and Technical Intelligence (S&TI) in support of Research and Development (R&D) as much as they do to any area, say operational intelligence in support of a force commander.

25X1 E.2 ☐ As with other forms of intelligence, the user of S&TI is a technical expert in the field in which he is supported. His views and insights on finished intelligence often can lead to improvements and to correction of errors. Careful consideration (by producers) of the expert opinion of the technically-qualified user prior to iterations of the intelligence cycle will result in responsive products with near-optimum expenditure of resources.

25X1 E.3 ☐ It follows that without rational evaluation procedures that are understood and used throughout the S&TI system, producers cannot achieve their full potential. Moreover, in the absence of well-defined evaluation steps, the S&TI system to a large extent will drive itself. Under such circumstances, analysts and their managers will tend toward scholasticism and pedantry. Production will proliferate to impress one's peers. The voice of the real user will be muted.

EVALUATION PHASE OF INTELLIGENCE CYCLE

25X1 E.4 ☐ Figure E.1, "Relationship of R&D User to Intelligence Cycle," illustrates the criticality of the product-evaluation phase of the intelligence cycle. It is at this phase that the customer can and should have a major impact on the entire intelligence cycle. By giving his reasoned views of the comprehensiveness, timeliness, and accuracy of the intelligence product, the user-reviewer sets the stage for refined requirements and production response.

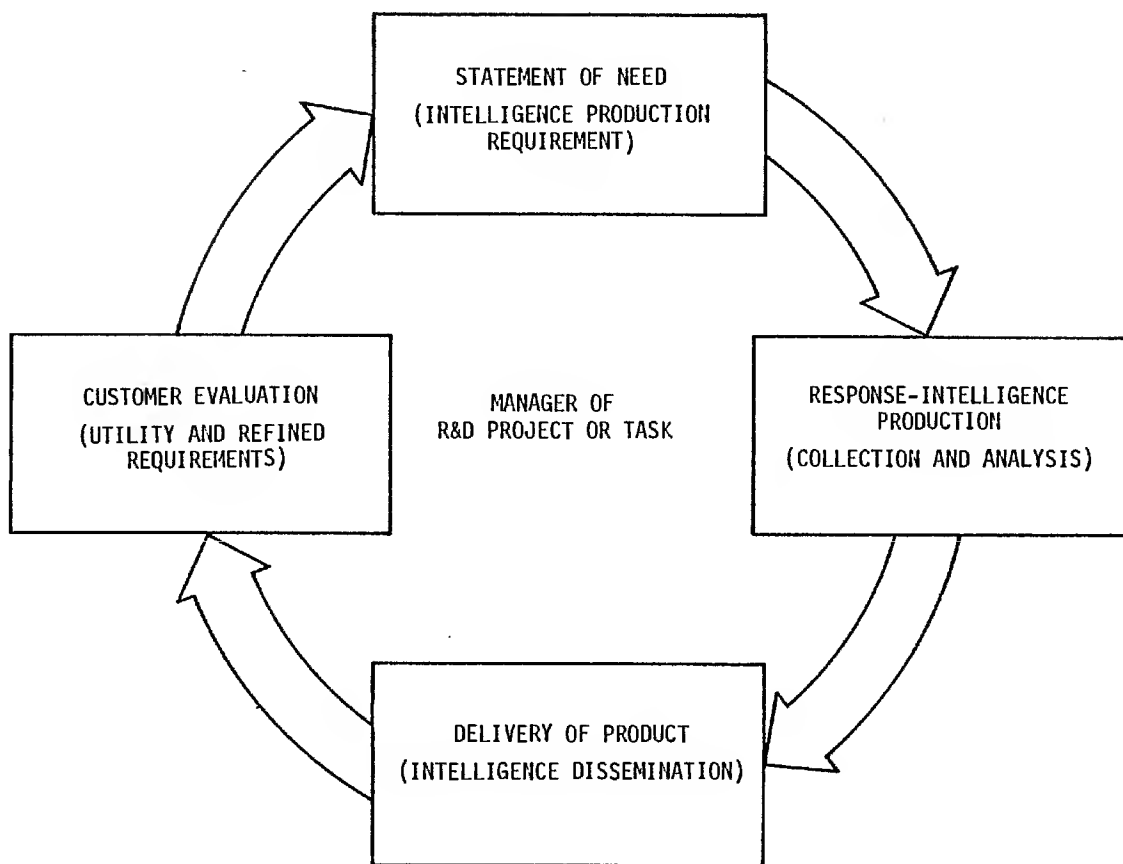
REVIEW REQUIREMENTS

25X1 E.5 ☐ To make the most beneficial impact on the intelligence cycle shown in Figure E.1, evaluation procedures should meet the following requirements:

- Promptness. The producer should know the user's views in time to redirect collection and analysis prior to the next iteration of the produce
- Thoroughness. A critique of all portions of the intelligence product of importance to the user must be given to the producer so that the latter can be fully responsive
- Comprehensiveness. Reviews by a variety of users should be consolidated at an intermediate focal point
- Relevance. The final, consolidated review should either confirm the current production approach or lead to refined requirements and a new Intelligence Production Requirement (IPR)
- User-Oriented. "Bench-level" users of the publication must participate if the review is to be meaningful.

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84

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FIGURE E.1
RELATIONSHIP OF R&D USER TO INTELLIGENCE CYCLE
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- Economy. The procedures for review should not be onerous. They should give a high return in improved S&TI for a small investment in time from the R&D user.

MODEL PRODUCT REVIEW PROCEDURES

E.6 ☐ The study team in conducting its inquiries sought out comments on the review process from those interviewed. Documentation on existing procedures was also sought. In general, the cross-section of S&TI and R&D personnel who offered opinions had poor regard for the prevalent "tearout sheet" approach. It was regarded as hit-or-miss in execution and as having low validity since the "tearout sheets" were often executed by unqualified personnel with no vested interest in improving the publication concerned.

E.7 ☐ One organization, the U.S. Army's DARCOM, had developed detailed procedures for intelligence product review and had issued them in the form of an instruction. These procedures are simple, direct, and applicable to any area of intelligence. They are outlined in general terms ^{1/} in the following summary sentences:

- The local intelligence officer (at command or laboratory) upon receipt of a prepublication notice ascertains from printout number 4 of the master list who his "A-priority" ^{2/}

^{1/} This summary is extracted from a DARCOM instruction, but is presented in generalized terms to indicate the wide applicability of the techniques.

^{2/} An "A-priority" user is one who has indicated the publication has information vital to his effort or who has submitted a relevant IPR.

users are, and orders sufficient copies for review

- After the publication is in hand, the local intelligence officer works with A-priority users to prepare a written evaluation. When there is more than one A-priority user at a command or laboratory, the local intelligence officer aggregates the comments, synthesizing if desirable
- The local intelligence officer forwards his results to the producer within 45 days
- If warranted, an Intelligence Production Requirement (IPR) is prepared and forwarded by the local intelligence officer. Material Headquarters may also designate a lead local intelligence officer to prepare an IPR if more than one activity is involved
- The producer consolidates the reviews of individual local intelligence officers and forwards them to the material command where, if endorsed to the Service intelligence headquarters and DIA, they become officially stated positions.

25X1 E.8 ☐ A system of the type outlined in the preceding paragraph is eminently workable and will result in user satisfaction through product improvement. It is highly selective from the point of view of the R&D facility, for it requires action only on those intelligence products considered of unusual value by users.

APPENDIX F
DRAFT DIRECTIVES

25X1 F.1 ☐ Section III in the body of the report, "Community Problems and Deficiencies", describes areas where improvements should be made in S&TI support to R&D. Section V, "Recommendations", outlines actions needed to make those improvements.

25X1 F.2 ☐ To begin the actions recommended in Section V and to provide for prompt and efficient completion of them, a directive and two memoranda should be issued along the lines of the drafts contained in this appendix. These drafts are as follows:

- Department of Defense Directive promulgating policy for Scientific and Technical Intelligence (S&TI) support to Research and Development (R&D). This directive also outlines responsibilities for actions needed to: (a) establish a DoD-wide system of S&TI support to R&D and (b) coordinate with the CIA in furnishing S&TI support to DoD R&D.
- A memorandum from the acting Deputy to the Director of Central Intelligence for the Intelligence Community to the Deputy Director for Intelligence outlining broad policy for CIA coordination with DoD in the field of S&TI support to R&D. The directive provides guidance to ensure that CIA S&TI products of value to DoD R&D are furnished systematically.

- An Intelligence Community Staff Memorandum promulgating policy for Intelligence Community Coordination of S&TI support to RDT&E. This memorandum establishes a coordinating committee and outlines actions to be taken by it in connection with a Community-wide system of S&TI support to R&D.

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DEPARTMENT OF DEFENSE DIRECTIVE

Subject: Policy for Scientific and Technical Intelligence Support to Research and Development

Reference: (a) Defense Intelligence Agency Manual 75-1, "Scientific and Technical Intelligence Production," DIAM 75-1, dated 21 September 1977

I. PURPOSE

This Directive provides specific guidance to be used for furnishing scientific and technical intelligence (S&TI) to research and development (R&D) activities within the Department of Defense.

II. APPLICABILITY AND SCOPE

A. The provisions of this Directive apply to all Military Departments and Defense Agencies involved in the production of scientific and technical intelligence (S&TI) and in its use for R&D. Specifically included are the Director Defense Research and Engineering (DDR&E), the Defense Intelligence Agency (DIA), the U.S. Army Material Development and Readiness Command (DARCOM), the Air Force Systems Command (AFSC), the Naval Material Command (NAVMAT), the Army Assistant Chief of Staff for Intelligence (ACS(I)), the Office of Naval Intelligence (ONI)/Naval Intelligence Command (NAVINTCOM), and the Air Force Assistant Chief of Staff Intelligence (AF/IN).

B. The term scientific and technical intelligence (S&TI) is used in this Directive in a specific sense to include all publications on foreign weapon-related technology that are used in support of U.S. military R&D programs, projects, and tasks. A compilation of these publications in conspectus form is contained in (a) the DIA Catalog of Approved Scientific and Technical Intelligence Tasks (CAST),

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(b) the Register of Intelligence Publications (RIP), and (c) the Scientific and Technical Intelligence Register (STIR).

- C. Nothing in this Directive is intended to limit requests for information and the satisfaction of those requests by the processes specified in reference (a). This Directive provides policy guidance in consonance with reference (a) to ensure maximum availability of information for users in the R&D Community.

III.

BACKGROUND

- A. Managers of DoD R&D programs, projects, and tasks require a system for ascertaining availability of relevant intelligence, stating requirements for additional information, ensuring receipt of needed publications, and affecting the content and format of future intelligence publications as a result of evaluative comment.
- B. Producers of S&TI require a general system for determining who are the users of their publications and the importance of their publications for specific R&D programs, projects, and tasks. Producers of S&TI should have the means for determining how responsive their publications are to the needs of R&D users.
- C. A general system for precise identification of R&D users would ensure that S&TI publications are sent to those who have need for them. Moreover, it would prevent unnecessary burdens of printing, storing, and accounting, by preventing overdistribution.

IV.

OBJECTIVES

The objective of this Directive is to establish a DoD-wide system which will:

- (a) Develop a data base of explicit associations between the DoD S&TI and R&D programs, projects, and tasks;
- (b) Provide for systematic user evaluation of selected, high-priority S&TI publications supporting R&D, with a view to making them more useful by reformatting, aggregating, or eliminating;

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- (c) Ensure accurate distribution lists for S&TI so that under-distribution and over-distributions are eliminated;
- (d) Close the producer-user gap, by placing at the local level, intelligence officers who are trained in techniques of S&TI support to R&D; and
- (e) Enable productive cooperation with a non-DoD S&TI production agency, CIA.

V.

POLICY AND RESPONSIBILITIES

- A. The Service material commands will arrange for intelligence officers and R&D personnel at the local level to tabulate specific associations between publications in the DIA S&TI production program and funded R&D projects and tasks. Provision should also be made for correlation with the CIA production program when it becomes available. Intelligence gaps will be identified at the intelligence officer-R&D manager level and stated as Intelligence Production Requirements (IPRs) to DIA via Material Command Headquarters and Service Intelligence Agencies. The tabulations of associations between S&TI and R&D programs and the IPR's will constitute a statement of the R&D managers needs as expressed to the local intelligence officer.
- B. The Service Intelligence Agencies will review IPR's and product evaluations to ensure consonance with their broad responsibilities for threat evaluation, tactical support, budget requirements, and the like.
- C. The Defense Intelligence Agency will prepare a master data base from the tabulations of associations between the S&TI and R&D programs provided by the three Services. Provision will be made for incorporating data on the CIA S&TI production program when available. DIA will provide the master data base to intelligence managers in the Services, along with selected sorts which will provide the bases for such things as S&TI publication distribution lists, assignment of responsibilities for product evaluation, and publication-user identification.

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- D. Products of the DIA S&TI program will be evaluated at the local level and the evaluations forwarded to Material Command Headquarters for consolidation and further forwarding to DIA through Service intelligence channels.
 - E. DIA will make other sorts of the master data base to provide intelligence managers with initial insights into utility of publications. DIA will receive evaluations of S&TI publications as consolidated by the individual Services and take action for improvement in content of publications and use of resources through change in emphasis, reformatting, or combining.
 - F. DIA will establish a short course at the Defense Intelligence School to train all local intelligence officers on an incremental basis in the techniques of intelligence support to R&D.

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VI. [] EFFECTIVE DATA, IMPLEMENTATION, AND COORDINATION

- A. This Directive is effective immediately.
- B. Four copies of implementing documents will be forwarded to the Director of Defense Research and Engineering within 90 days.
- C. To facilitate intelligence community coordination of S&TI support to R&D the following will furnish representation to a coordinating committee to be chaired by a representative of the Intelligence Community Staff (ICS):

DDR&E	- member
DIA	- member
CIA	- member
DARCOM	- observer
ONI/NAVINTCOM	- observer
NAVMAT	- observer
AFSC	- observer
AF/IN	- observer
ACS(I)/DA	- observer

Secretary of Defense

DRAFT

MEMORANDUM FOR: Deputy Director for Intelligence

FROM: John N. McMahon
Acting Deputy to the DCI for the
Intelligence CommunitySUBJECT: CIA Coordination with the Department of Defense
for Scientific and Technical Intelligence Sup-
port to Research and Development

1. Purpose: It is the purpose of this memorandum to furnish broad guidance to improve utilization of CIA scientific and technical intelligence (S&TI) products by Department of Defense research and development (R&D) activities.

2. Background: The Intelligence Community Staff recently examined the means whereby scientific and technical intelligence is provided to project managers of Defense research and development. The examination showed that, in general, DoD R&D personnel are not aware of the S&TI support available to them, nor are producers of S&TI aware of the needs of the entire Defense R&D Community. In short, the producer-user loop is not closed. Based on our limited survey, it may well be that this situation pertains to all users of S&TI.

3. The examination showed that because of the gap between S&TI producer and R&D user, the latter normally is not involved in the intelligence cycle. This serious defect was particularly damaging with regard to requirements and product evaluation. Moreover, there is no Community-wide, systematic method for informing R&D users of those portions of S&TI programs of direct interest to them. As a result, there is a potential for repeated expenditure of costly S&TI resources to satisfy similar R&D requirements. The costs of S&TI programs and their importance to Defense R&D, [REDACTED]

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[REDACTED] underlie an urgent need for improvement.

4. The Intelligence Community Staff examination showed, not surprisingly, that CIA S&TI products were poorly utilized by DoD R&D. The principal problems are (a) the CIA S&TI program is not documented in a form useful to DoD and (b) there is no entity in CIA which ensures that CIA S&TI products are well-utilized in DoD.

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5. Procedures developed and tested in one segment of the Community demonstrate that it is possible to close the producer-user gap and to provide S&TI support with respect to DoD R&D. The key to doing this is the logical correlation of relevant portions of the S&TI and R&D programs at the level of development commands and laboratories. The results of correlations at the level of the actual user can be combined and machine-sorted to provide the information needed by S&TI producers for decisions ranging from distribution control to improvement of intelligence products. The initial step, precise correlation, is easily done, since both the S&TI and R&D programs have detailed documentation.

6. Because the Defense S&TI and R&D programs are so well documented, the most fruitful place initially to close the producer-user gap is in the Defense portion of the Community. The Department of Defense is in the process of establishing Department-wide, uniform procedures for systematic S&TI support to R&D.

7. Action Required: The CIA should document its S&TI program in a form which will permit it to be correlated with the DoD R&D program. The documentation should be along the lines of the Defense Intelligence Agency CAST (Catalog of Approved Scientific and Technical Intelligence Tasks).

8. To facilitate coordination with the rest of the Intelligence Community in furnishing S&TI support to R&D, the CIA should designate a representative for membership status on the Interagency S&TI Coordinating Committee.

9. If results of the above give the benefits envisioned for Defense R&D, there will be a basis for systematic attention to other users of S&TI, including those outside DoD.

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MEMORANDUM FOR: Director of Performance Evaluation
and Improvement

FROM: John N. McMahon
Acting Deputy to the DCI for the
Intelligence Community

SUBJECT: Intelligence Community Scientific and Technical
Intelligence Support to Research and Development

1. Purpose: This memorandum provides policy for an interagency committee to develop, implement, and coordinate an Intelligence Community system for scientific and technical intelligence (S&TI) support to research and development (R&D).
2. Background: An examination of Intelligence Community procedures for S&TI support has shown the need for a system to close a gap between producers and users. Moreover, there is a requirement for a systematic approach to eliminating repeated use of S&TI resources to satisfy similar requirements from R&D users. The examination also showed that Central Intelligence Agency (CIA) products were not well-utilized by DoD R&D activities.
3. DoD has issued a directive that requires a DoD-wide system to correct current problems in S&TI support to R&D. The Director of Central Intelligence has issued broad policy guidance for CIA coordination with DoD so that CIA S&TI products can be utilized better by DoD R&D activities.
4. Responsibilities and Composition: To ensure development of an effective Community-wide system for S&TI support to R&D and to ensure its implementation at an early date an interagency intelligence coordinating committee will be formed. It will be chaired by a representative of the Intelligence Community Staff. Other members will be from DDR&E, DIA, and CIA. Observers will be from:
 - U.S. Army, Development and Readiness Command (DARCOM)
 - The U.S. Navy Material Command (NAVMAT)

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- The Air Force Systems Command (AFSC)
- The Army Assistant Chief of Staff, Intelligence (ACS(I))
- The Office of Naval Intelligence/Naval Intelligence Command (ONI/NAVINTCOM)
- The Air Force Assistant Chief of Staff, Intelligence (AF/IN).

6. Action Required: The Director of Performance Evaluation and Improvement will assume overall responsibility for the effective functioning of the Interagency Coordinating Committee for S&TI Support to R&D. He or his representative will chair the committee.

7. As experience is gained, the effort should be extended to non-Defense R&D users of S&TI, and membership of the coordinating committee adjusted accordingly.

APPENDIX G
GLOSSARY

25X1 G.1 This glossary is provided for ease of reference. It lists a few of the words and expressions which may not be familiar to all readers of the report. In all instances the expressions are defined in the report or used in context so that their significance is clear. Someone who is reading only portions of the report may miss the initial definition and may, therefore, find this listing useful.

Bench Level	Connotes actual R&D user of S&TI at the level of development command or laboratory. Usually the bench-level user is a person responsible for an R&D project or task.
Commodity	Used in the dictionary sense of something useful or valuable. In this report it applies to related R&D programs managed at a development facility, e.g., "Associated R&D activities are usually grouped in "commodity" organizations".
DARCOM	The U.S. Army Development and Readiness Command.
DI	Directorate of Intelligence. Local intelligence office at level of command or laboratory in U.S. Air Force Systems Command.
FIO	Foreign Intelligence Office. Local intelligence office at level of development command or laboratory in U.S. Army Development and Readiness Command.

Local Intelligence
Officer

Person in R&D billet at the development command or laboratory responsible for providing intelligence in support of R&D. They are known in the Services as follows: U.S. Air Force System Command--Directors of Intelligence (DIs); U.S. Navy Material Command--Scientific and Technical Intelligence Liaison Officers (STILOs); U.S. Army Development and Readiness Command--Foreign Intelligence Officers (FIOs).

Master List

A computer printout explicitly associating all DARCOM R&D projects and tasks with supporting S&TI production tasking. It is a primary means of correlating the S&TI and R&D programs. Inputs come from users at the local level, that is the development commands and laboratories. The printout shows all DARCOM R&D projects and tasks, associated S&TI tasks, user-assigned priority of association, and activity responsible for each R&D project and task. The master list is machine-sorted to provide S&TI management information.

Priority

Short for "priority assignment for user-level association of supporting intelligence with R&D". It is the R&D users view of an anticipated S&TI product in relation to his R&D project or task alone. It is not a rating of the overall product, since it does not consider other users. The three priority associations are as follows:

- A - R&D user considers product described by intelligence task as vital to his program. Evaluation of product will be submitted.
- B - Precise value of intelligence product cannot be determined by R&D user in advance. Evaluation is optional on selective basis.

C - Product described by intelligence task of probable value to R&D user for background and should be in supporting intelligence office data base. Evaluation optional on highly selective basis.

Scientific and Technical Intelligence (S&TI)

"The product resulting from the collection, evaluation, analysis, and interpretation of foreign scientific and technical information which covers: (a) foreign developments in basic and applied research and in applied engineering techniques; and (b) scientific and technical characteristics, capabilities, and limitations of all foreign military systems, weapons, weapons systems, and material, the research and development related thereto, and the production methods employed for their manufacture."*

STILO

Scientific and Technical Intelligence Liaison Office. Local intelligence office at level of development command or laboratory in U.S. Navy Material Command.

* JCS Pub. 1, Department of Defense Dictionary of Military and Associated Terms, 3 September 1974, pp. 289-90.